For example, if the base station received a signal having an energy level of 5000, it would assume the data rate is 1200 bps since this is the data rate associated with closest energy level stored in its table. The base station then sends a power control command to the mobile instructing it to increase power since at 1200 bps the base station expects to see an energy level of 6000.

The mobile decides how to use each power control command bit based on the value of the bit, the actual data rate used for the power control group, and the assumed data rate pattern that was used to compute the power control bit. The mobile knows which assumed data rate was used by the base station to create the power control decision by using the same procedure used by the base station: the data rate with the closest associated energy level.

The power control decision that the mobile uses to control its transmit power is determined by the following table:

	P.C. bit = UP	P.C. bit = DOWN
actual rate > assumed rate	increase power	ignore
actual rate = assumed rate	increase power	decrease power
actual rate < assumed rate	ignore	decrease power

This table states that if the power control bit that the mobile receives from the base station instructs the mobile to increase power and the actual data rate is greater than or equal to the assumed data rate, then the mobile increases its transmit power. But if the power control bit instructs a power increase and the actual data rate is less than the assumed data rate, the power control instruction is ignored by the mobile.

The above table also shows that if the actual rate is less than or equal to the assumed rate, the mobile will decrease power if the power control bit is received instructing the mobile to decrease power. If the actual rate is greater than the assumed rate, the power control command to decrease power is ignored.

A benefit of this alternate embodiment is that, depending on the error rate of the power control channel, soft decisions can be incorporated in the power control commands to change the step sizes of the power increments and decrements. This is especially beneficial on weak decisions when the actual data rate and the assumed rate are far apart.

We claim:

1. At a base station, a method for controlling transmitter power of a remote communication device which transmits a signal at a predetermined data rate of a plurality of data rates, each data rate having a different power level, the method comprising the steps of:

receiving said signal;

determining a quality level of said received signal;

comparing said quality level to each of a plurality of quality thresholds which each correspond to a respective power level of said plurality of data rates;

generating a power control signal in response to said comparing step, said power control signal comprising a plurality of power control commands, each of said power control commands corresponding to one of said plurality of data rates; and

transmitting said power control signal to said remote communication device.

2. The method of claim **1** wherein said plurality of data rates comprises N data rates and said power control signal comprises N power control commands, each of said power control commands corresponding to a different one of said plurality of data rates.

3. The method of claim **1** wherein said plurality of data rates comprises N data rates and said power control signal comprises N–1 power control commands, a first power control command of said N–1 power control commands corresponding to said comparing of said quality level to a maximum quality threshold of said plurality of quality thresholds and a remaining group of power control commands of said N–1 power control commands corresponding to said comparing of said quality level to each of a remaining group of quality thresholds of said plurality of quality thresholds.

4. The method of claim **1** wherein said power control signal comprises a plurality of power control groups, each power control group comprising:

a first power control bit corresponding to said comparing of said quality level to a first quality threshold of said plurality of quality thresholds; and

a second power control bit corresponding, in a first power control group of said plurality of power control groups, to said comparing of said quality level to a second quality threshold of said plurality of quality thresholds, and corresponding, in a second power control group of said plurality of power control groups, to said comparing of said quality level to a third quality threshold of said plurality of quality thresholds.

5. The method of claim **1** wherein said power control signal comprises a sequence of power control bits, with every other one of said power control bits corresponding to said comparing of said quality level to a first quality threshold of said plurality of quality thresholds, and a remaining set of power control bits of said sequence of power control bits alternating in corresponding sequence to said comparing of said quality level to a different one of said plurality of quality thresholds.

6. In a remote communication device having a transmitter which transmits a signal at a predetermined data rate of a plurality of data rates, each of said plurality of data rates having a different power level, said remote communication device communicating with a base station, a method for adjusting transmitter power of said remote communication device, said method comprising the steps of:

transmitting a signal to said base station at a predetermined data rate of the plurality of data rates, said signal having a power level corresponding to said predetermined data rate;

receiving a power control signal corresponding to said plurality of data rates, said power control signal comprising a plurality of power control commands, each of said power control commands corresponding to one of said plurality of data rates; and

adjusting said transmitter power in response to said power control signal and said predetermined data rate.

7. The method of claim **6** wherein said plurality of data rates comprises N data rates and said power control signal comprises N power control commands, each of said power control commands corresponding to a different one of said plurality of data rates.

8. The method of claim **6** wherein said plurality of data rates comprises N data rates and said power control signal comprises N-1 power control commands, a first power control command of said N–1 power control commands corresponding to a maximum data rate of said plurality of data rates and a remaining group of power control commands of said N–1 power control commands corresponding to each of a remaining group of data rates of said plurality of data rates.